4. (Amended) A filter in a maximum-likelihood-sequence-estimation equalizer, which demodulates at least one received radio signal modulated with M-ary modulation, for producing a hypothesized received signal sample to be used for determining a branch metric, said filter comprising:

a memory for storing a product look-up table having pre-computed values equal to a product of a channel tap estimate and a hypothetical symbol value for different iterations; and

an adder for adding select entries from the product look-up table to produce a hypothesized received sample signal.

13. (Amended) A method for computing a branch metric in a multi-channel maximum-likelihood-sequence-estimation (MLSE) equalizer which demodulates M-ary modulated signals, said method comprising the steps of:

pre-computing a plurality of possible values for each channel in said multi-channel MLSE to be used in the branch metric computation;

storing said plurality of possible values for each channel in separate product look-up tables;

adding select values from said separate product look-up tables; and

computing said branch metric using said added select values.

REMARKS

Claims 1-13 are pending in this case. Reconsideration and further examination is respectfully requested.

Claims 1, 4, and 13 have been amended to include the term "look-up" to describe the product tables referenced in the claims. The tem "look-up" further illustrates the fact that the product tables calculated by the present invention are re-usable.

Information Disclosure Statement Objection

With respect to the Examiners objection regarding references cited in the application but not submitted in proper IDS form, applicant does not believe an IDS is warranted. There are three such references in the application. None are thought to be relevant to patentability by applicant. Rather, they cite sources of information that provide a context to the present invention but are not materially related to the issue of patentability. The first two references (p.2, lns. 4-5 and p.9, lns.